Abstract of the Invention

This is a catheter assembly and a section of that catheter assembly. That catheter assembly may be used in accessing a tissue target within the body, typically a target which is accessible through the vascular system. Central to the invention is the use of a braided metallic reinforcing member, typically of super-elastic alloy ribbon, situated within the catheter body in such a way to create a catheter having an exceptionally thin wall, controlled stiffness, high resistance to kinking, and complete recovery in vivo from kinking situations. The braid may have a single pitch or may vary in pitch along the axis of the catheter or catheter section. The braided ribbon reinforcing member typically is placed between a flexible outer tubing member and an inner tubing member to produce a catheter section which is very flexible but highly kink resistant. The catheter sections made according to this invention may be used alone or in conjunction with other catheter sections either made using the concepts shown herein or made in other ways. The more proximal sections of the catheter assembly are often substantially stiffer than the more distal sections due to the presence of stiff polymeric tubing or metallic tubing or composited materials in the stiffer section.